

# Lincoln Environmental Action Plan

2017-2018





## Vision

Protecting our environment is not new. Nebraskans have been practicing conservation for the entire 150 years of our State's history. I spent a big part of my youth on the family farm in Richardson County. It was instilled in us at an early age that we had a responsibility to be good stewards of the land, so we could pass on a healthy and productive farm to future generations. It was part of being a good citizen.

Living in a city does not change our responsibility to be good stewards of the land. We have to practice conservation in urban areas to pass on a healthy and productive community to our children and grandchildren. It's the right thing to do.

That's why my Administration is working with the community to develop a plan. The Lincoln Environmental Action Plan is how we come together as a City and make the same commitment to be the same good stewards of the land as the generations before us. If we can increase recycling, keep our water and air clean, preserve our natural resources and reduce the emissions that harm our local environment, we will have left a legacy for our community for the next century.



**Mayor Chris Beutler**



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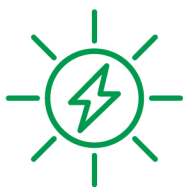
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# Introduction

The Lincoln Environmental Action Plan is Lincoln's community blueprint for the actions needed to create a healthier environment. It lists 13 strategies that should be implemented to ensure that Lincoln is protecting our environmental future.

The plan was formed from the work accomplished by the Mayor's Environmental Task Force. In 2016, the Task Force formed five subcommittees that addressed:



Energy



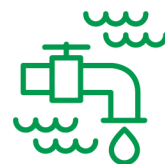
Land Use



Transportation



Waste



Water

The subcommittees reviewed historical trends and initiatives, benchmarked plans of regional cities and developed recommendations suitable to Lincoln's needs. Some of the recommendations were already in progress or already City policy. Others still need to be initiated or more fully deployed.

The Plan is the beginning of on-going discussion on how we best accomplish our goals for Lincoln's environmental future. It will be reviewed and updated every two years to reflect our progress towards the Plan's goals and the community's changing priorities.





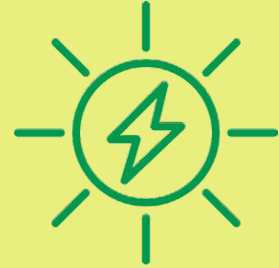
## Progress, Goals and Performance Indicators, and Action Strategies

The Plan is predicated on goals and performance indicators that provide guidance to policy makers. Lincoln has already made great strides on many of these goals. Those successes are listed in the “Progress” section of each policy area. The Plan coordinates and encompasses the environmental principles of Lincoln’s LPlan 2040, the Long Range Transportation Plan, the Mayor’s Strategic Plan and the master plans for Lincoln’s utilities.

## Business Initiatives

Government alone cannot meet the challenge of protecting Lincoln’s environmental future. Lincoln’s private sector has long been a leader for environmental responsibility. Companies like Lincoln Industries, Assurity Life Insurance, B&R Stores, Zoetis and others have put in place policies that save money as well as promote a healthier environment. Their stories are told throughout this document to illustrate that working together in public-private partnerships is the most effective means of ensuring the success of our community plan.

# Energy



**Goal:** Support and promote municipal and community-wide energy conservation and the increased use of renewable energy sources and technologies which decrease long-term fuel costs, cut greenhouse gas emissions and improve energy resilience.

## Energy: Progress

- Lincoln Electric System (LES) is demonstrating strong environmental leadership. The amount of renewable energy generated by LES is equivalent to nearly 50% of our community's annual electric energy consumption. LES has commissioned a community solar facility, provides incentives for customer-owned renewable generation and offers significant financial incentives and technical support for customer energy efficiency projects. LES continues to pursue a sustainability target to offset projected load growth through a combination of renewable generation and energy efficiency.
- Approximately 6% of the City fleet is fueled by alternate/renewable sources such as compressed natural gas (CNG) and electricity.
- Heat energy is captured from Lincoln's Water Resource Recovery Facilities to increase internal energy efficiency. The facilities also use treated effluent for heating/cooling of the University's Innovation Campus and cooling water for the LES Terry Bundy Generating Station.
- The City program "ReEnergize" helped weatherize private and public buildings across the community to increase their efficient use of energy and save costs.
- Since 2013, landfill gas from the Bluff Road landfill has been captured for fueling a nearby 4.8 megawatt engine/generator set operated by LES. Biogas from Lincoln's Theresa Street Water Resource Recovery Facility is also used to generate electricity on-site.
- In 2017, the Mayor and City Council approved a change to allow greater opportunity for small scale (100 kilowatt or less) solar projects in more zoning districts.
- The City parking garage lighting is being converted to LED technology, cutting energy costs at the garages by about one-third.



Landfill gas collection at the Bluff Road landfill.

## Energy: Performance Indicators

- Reduce city wide per capita greenhouse gas emissions by 25% by 2025 compared to the base year of 2011.
- Increase the use of renewable energy consumed by municipal operations by 25% by 2025 and 50% by 2030 compared to the base year of 2011.
- By December 2017 obtain a “gold” designation in the Department of Energy’s SOLSMART program, which measures whether City policy and processes are solar friendly for residents and businesses that seek to start solar projects. Lincoln currently has a “bronze” designation.

### Action Strategy: Energy #1

Convert to LED street lights.

**What:** The City will convert its estimated 31,000 street lights to LED technology to save on energy and maintenance costs and generate a “Green Fund” for future Cleaner Greener initiatives.

**Why:**

- LED street lights are more efficient and will save money by reducing the amount of electricity consumed and maintenance costs.
- Improved visibility produced by LED street lights helps keep drivers safe, improve neighborhood security and increase residents’ feelings of safety.

### Action Strategy: Energy #2

Improve energy efficiency in City of Lincoln municipal buildings.

**What:** The City will save energy by improving the efficiency of City buildings and operations. Lower energy costs could serve as the payback source for the financing necessary to complete these energy efficiency capital improvements.

**Why:**

- Increasing the energy efficiency of City buildings helps conserve energy, lower overall operating costs and reduce greenhouse gas emissions.

## Action Strategy: Energy #3

Reduce non-renewable fuel usage in the City fleet operations by 50% by 2030.

**What:** The City will substantially reduce greenhouse gas emissions through:

- Retiring older, high-polluting vehicles and replacing them with modern low-emission ones.
- Making better use of pool vehicles.
- Investing in vehicles using alternative and renewable fuels, including but not limited to hybrids, electric vehicles and those using compressed and renewable natural gas (CNG and RNG), fueled either from local commercial sources or from landfill gas and/or digester gas produced at water resource recovery facilities.

**Why:**

- Older, inefficient engines that burn gasoline and diesel fuel are major contributors to greenhouse gas emissions. Increasing the City's fleet use of renewable fuels and improving operational efficiencies will substantially reduce our greenhouse gas emissions and lower costs.
- A significant focus will be placed on StarTran, which is aggressively investing in alternate fuel vehicles (CNG/RNG). By reducing the cost of fuel, StarTran will have additional resources to continue to improve its service to the community.

## Action Strategy: Energy #4

Improve energy efficiency of Lincoln's new homes and buildings.

**What:** The City will work with the homebuilding industry and other stakeholders to encourage energy efficiency standards that reduce the greenhouse gas emissions resulting from energy use in homes and commercial buildings.

**Why:**

- Efficiency improvements could save consumers over \$15 million over the next ten years in energy bills and avoid over 140,000 tons of greenhouse gas emissions.





#### BUSINESS INITIATIVE

## Assurity Life Insurance.... a Leader for a Cleaner Greener Lincoln

A focus on sustainability reflects Assurity's first corporate value of ethical behavior; it's good for business. And, it's very simply the right thing to do.

In keeping with their values, Assurity built its new office building along the Antelope Valley to LEED Gold Certification from the U.S. Green Building Council. That made it one of the first privately owned major office buildings in Nebraska to receive the designation. From water-conserving features to the living green roofs, Assurity Center was built with the utmost attention to minimizing environmental impact in its construction and operation.

Assurity's sustainability efforts did not stop with the LEED designation. In 2012, Assurity attained Groundwater Guardian Site status for its efforts to reduce water usage by reclaiming and reusing collected stormwater to irrigate the indigenous sustainable landscaping. In addition to reclaimed water, the campus pulls water from wells in the area instead of using public water for irrigation. This designation was renewed in 2017 as the company continues its effort to reduce water usage.

In 2015, Assurity was designated a certified B Corporation. B Corporations meet the highest standards of verified social and environmental performance, public transparency and legal accountability. Collectively, B Corporations lead a growing global movement of people using business as a force for good.

# Land Use



**Goal:** Preserve and enhance Lincoln's urban tree canopy and open space; seek opportunities to maximize the value of underutilized property through policies and initiatives supporting infill and urban agriculture.

## Land Use: Progress

- The Lincoln-Lancaster County Comprehensive Plan recommends that all City residents live within a half mile of a park.
- The Mayor and City Council included \$1.9 million in the 2016-18 budget for planning and implementation of strategies to combat the Emerald Ash Borer (EAB) and protect our tree canopy.
- About three acres of community gardens have been established across the community, with plans for significant growth.
- In 2017, the Mayor and City Council approved a zoning change to allow gardening in front yard setbacks.
- Less than 1% of tallgrass prairie once found in the U.S. remains today. A public-private partnership has formed to establish the Prairie Corridor on Haines Branch, a tallgrass prairie passage and trail that will preserve and enhance unique prairie remnants.



These children are enjoying the fruits of working in one of Lincoln's community gardens. Photo by Taura Horn, courtesy of Community Crops.

## Land Use: Performance Indicators

- Replace EAB-threatened public ash trees on a one-to-one basis with the goal of no single tree species representing more than 10% of the total public tree population.
- Maintain and increase the percentage of land identified as greenways in the City's Comprehensive Plan.
- Maintain the Comprehensive Plan goal of 8,000 infill units by 2040.
- Identification of 33 acres that could be utilized for urban agriculture in 2017-18.

## Action Strategy: Land Use #1

### Replace ash trees destroyed by the Emerald Ash Borer.

**What:** The City will develop a plan to respond to the impending destruction of 14,000 public and 40,000 private ash trees. The plan will include:

- Tree treatment, removal and other response policies.
- Funding strategies for ash tree removal and replacement with the goal of a 1-to-1 tree placement for trees lost. The current rate is 3 replacement trees for every 5 lost.
- Recommendations on how to maintain current forestry program efforts while addressing the EAB.
- Efforts to increase tree diversity.
- Methods to ensure the highest and best use of recovered wood products.

**Why:**

- Trees increase property values, and their shade helps reduce the need to cool homes during the summer.
- Trees are a major contributor to improved stormwater quality and flood prevention and mitigation.
- Trees clean our community's air, a key to maintaining good air quality and protecting health.
- Lincoln takes pride in its trees and wants to maintain our tree canopy for future generations.

## Action Strategy: Land Use #2

### Increase urban agriculture opportunities.

**What:** The City will support local food and urban agriculture initiatives through engagement and assistance, including support for the efforts of the Lincoln-Lancaster County Food Policy Council (LLFPC) and other organizational efforts to:

- Inventory public and private lands for underutilized property potentially suitable for urban agriculture activities.
- Increase the quality and quantity of community gardens and orchards.
- Expand pollinator habitat.
- Develop enhanced food production and marketing strategies.

**Why:**

- Local food production and consumption substantially lowers the environmental impact of the food supply chain, supports the local economy and creates jobs and vocational training opportunities.

## BUSINESS INITIATIVE

# Zoetis Environmental Sustainability – It's the right thing to do!

At every level of Zoetis' organization, it is focused on environmental sustainability efforts and its commitments to this are wholly in line with their Core Beliefs. Two of their Core Beliefs are especially impactful.

- **Always Do The Right Thing** – Act as a responsible partner, neighbor, and citizen in our communities and
- **Run It Like You Own It** – Use resources wisely.

Zoetis knows the world around them is changing and we all have a part to play. Zoetis has launched an enterprise-wide sustainability effort. Colleagues and teams across Zoetis are encouraged to find innovative ways to minimize the potential impact of its activities and the business on the environment.

Zoetis has identified key areas where they can make the most difference:

Focus Area	Objective
<b>Energy and Greenhouse Gas Reduction</b>	<ul style="list-style-type: none"><li>• Improve energy efficiency and reduce the greenhouse gas emissions associated with operations, while reducing energy costs.</li></ul>
<b>Natural Resources Conservation and Production Processes</b>	<ul style="list-style-type: none"><li>• Minimize the use of water and other natural resources.</li><li>• Minimize the waste associated with operations anywhere in Zoetis.</li><li>• Improve the environmental footprint and production yields of Zoetis' production and supply processes.</li></ul>
<b>Public Private Partnerships</b>	<ul style="list-style-type: none"><li>• Household Hazardous Waste Collection Events (21 years running)</li><li>• Restored Saline Wetland</li></ul>

# Transportation



**Goal:** Support continual improvements in Lincoln’s transportation system and encourage efficiency, multi modal choices, access, and investment in “Smart City” technology.

## Transportation: Progress

- The City is implementing the Green Light Lincoln program to use “smart” technologies to move traffic safely and efficiently, saving energy and reducing vehicle emissions.
- StarTran has implemented route changes to increase service and expand public transportation options for the community.
- The N Street Bikeway encourages more environmentally friendly transportation.
- A bike-sharing program is anticipated to be in place by the spring of 2018.
- The City adopted a “Complete Streets” policy to emphasize the need for facilities that support walking and biking as alternatives to vehicle transportation.
- The City has installed 22 electric vehicle (EV) charging stations in public parking garages. Data captured at the charging stations is demonstrating the economic and environmental benefits of EV technology.



The N Street Bikeway allows riders a protected route through downtown Lincoln.



## Transportation: Performance Indicators

- Increase citizen satisfaction rating for “ease of bike travel in the City” among all respondents by August 31, 2018.
- By August 31, 2017, strive for an average of 250 riders per day on the N Street Cycle Track.
- By May 31, 2018, establish baseline data on use of the bike share program’s 100 bicycles and 15 docking stations, and project a 10% increase in ridership in the next year.
- Maintain or increase Lincoln’s Bikescore ranking of 62 (1<sup>st</sup> in Nebraska).
- Maintain or increase Lincoln’s Walkscore ranking of 43 (3<sup>rd</sup> in Nebraska).

### Action Strategy: Transportation #1

Develop electric vehicle infrastructure.

**What:** The City will develop a strategy for electric vehicle infrastructure deployment together with the Metropolitan Planning Organization (MPO) and other community stakeholders.

**Why:**

- Electric vehicles are rapidly becoming the vehicle of the future for passenger cars, light duty trucks and buses. America’s “Smart Cities” are investing in electric vehicle infrastructure to reduce emissions and the costs of operation while increasing mobility choice in their communities.

### Action Strategy: Transportation #2

Implement the “Green Light Lincoln” program for more environmentally friendly traffic flow.

**What:** The Greenlight Lincoln program uses “smart” technologies to move traffic safely and efficiently. The program has three phases:

- Phase I – Implement smart traffic solutions at 130 intersections by December 2017.
- Phases II and III – Upgrade and re-time the City’s remaining traffic signals in 2018 and 2019.

**Why:**

- Efficient traffic flow saves energy and reduces vehicle emissions.

## Action Strategy: Transportation #3

Reduce vehicle traffic by increasing access to alternate transportation.

### **What:**

The City will:

- Continue progress on the StarTran Transit Development Plan (TDP) to expand service and reduce the time users wait for buses.
- Review Lincoln's funding sources for sidewalk repair to ensure that a sidewalk repair backlog does not re-emerge in the future after increased City sidewalk investment.
- Meet the Capital Improvement Plan goals of constructing of 1 to 2 miles of trail annually.

### **Why:**

- Alternate transportation like walking, biking or taking the bus saves energy and reduces vehicle emissions and congestion.



#### BUSINESS INITIATIVE

## Lincoln Industries: Environmental Sustainability has a “Triple Bottom Line.”

Lincoln Industries earned the prestigious ISO 14001 certification - the international standard for environmental management - in 2000. Today, it is one of the industry's most recognized companies for environmental responsibility, with a record of zero environmental fines in 50 years.

The leadership of Lincoln Industries believes that environmental sustainability contributes to the company's “Triple Bottom Line”:

- **Environmental Bottom Line:** Lincoln Industries' programs reduce emissions to air, water and soil. “Metals to Water” cleans wastewater before it is discharged. The company's commitment to recycling is keeping metals, fiber and plastic out of Lincoln's landfill. The “Closed Loop Recycling” process prevents wastewater treatment sludge (nickel recycle) from entering the landfill. In 2015, Lincoln Industries recycled 2,371,465 pounds of material.
- **Economic Bottom Line:** Company policies that promote resource reduction cut Lincoln Industries' costs for natural gas, electricity, water and chemicals.
- **Social Bottom Line:** Lincoln Industries promotes environmental partnerships with its employees and the community by hosting annual “Household Hazardous Waste Collection” events, sponsoring Arbor Day and Earth Day activities and organizing employees to “Adopt a Trail.”

# Waste



**Goal:** Continue incentives for waste reduction, diversion, and recycling to minimize environmental impacts, preserve landfill space, conserve resources, and create jobs.

## Waste: Progress

- Mayor Beutler introduced and City Council passed a plan to divert cardboard from Lincoln's landfill starting April 1, 2018.
- The City is improving community recycling drop off locations.
- A Hazardous Materials Collection Center has been built at the N 48<sup>th</sup> Solid Waste Facility. Starting in September 2017, it will collect hazardous waste from the public twice a month and from small businesses four times a year.



The new Hazardous Materials Collection Center at the N. 48<sup>th</sup> Street Solid Waste Facility.

## Waste: Performance Indicators

- Reduce the annual per capita disposal rate to the landfill from 2,250 to 1,940 lbs. per person by 2018.
- Increase the recycling rate from 22% (2015) to 50% by 2030.
- Increase the amount of hazardous waste material diverted from the landfill to 100,000 lbs. per year.

## Action Strategy: Waste #1a

Increase the recycling rate to 50% by 2030 with a comprehensive residential and commercial recycling plan.

## Action Strategy: Waste #1b

Increase waste and recycling diversion in City of Lincoln buildings to help meet community goal of increasing the recycling rate to 50% by 2030.

## Action Strategy: Waste #1c

Develop a construction and demolition recycling strategy for publicly supported construction projects.

**What:** A comprehensive residential and commercial waste reduction and recycling education and outreach program will help us achieve our community recycling goals. The plan should include recycling incentives and/or behavior change efforts to increase recycling participation and waste diversion. The plan will set goals that will be monitored for annual progress comparisons. The implementation of the City Council approved cardboard diversion on April 1, 2018 is a first step in meeting the goal of increasing our recycling rate to 50%.

City operations will meet or exceed per capita waste reduction and recycling goals by implementing department and/or facility level “green teams” to organize and manage waste diversion and recycling efforts.

The city will develop a multi-year phased construction and demolition waste diversion plan for major municipal construction projects and publicly funded economic or community development projects..

**Why:**

- Reducing the amount of recyclable material entering the landfill slows the need for expensive landfill expansions.
- Recycling conserves resources and creates jobs.
- Much of what is buried in Lincoln’s landfill has commercial value that can be recovered.
- Planning, structure, organization, funding, education and outreach are fundamental elements necessary for a successful recycling program that reduces environmental impact.





#### BUSINESS INITIATIVE

### Good stewardship is goal of B&R Stores

B&R Stores continuously researches ways to be better stewards of our environment by reducing landfill waste and energy consumption.

B&R Stores has recycled cardboard for 40 years. The company recycles 175 tons of cardboard each month, providing a positive income stream and, more importantly, diverting this commodity from our landfills.

For the last two years, B&R Stores has partnered with Prairieland Dairy, which picks up 37 tons of organic waste from the bakery, deli, produce and meat departments and hauls it to the farm in Firth. The waste becomes Prairie Gold compost, which is sold at B&R Stores.

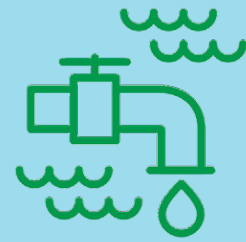
For more than 20 years, used cooking oil from the bakery and deli has been recycled, and then reconstituted into bio-diesel fuel.

Customers continue to see more LED lights on refrigerator case doors. The lights and doors reduce electrical usage by 70%. LED lighting is used throughout the stores to conserve energy. When appropriate, B&R redirects the heat from the compressors that operate the refrigerated cases and recirculates it to heat water and heat the store in the winter. In new stores, the company installs distributed load systems that bring the refrigerated system out to the floor, using less material and fewer refrigerants for greater efficiency.

B&R Stores also collects plastic shopping bags for recycling at all its stores and hosts recycling centers at many of its locations.

Being a good steward means more than diverting waste from the landfill. It also means reducing and conserving energy and finding efficiencies. For B&R Stores, that leads to the savings that allow the company to be competitive in the market.

# Water



**Goal:** Ensure the quality and resilience of Lincoln's water supply and watershed through comprehensive planning, conservation and funding support.

## Water: Progress

- The Mayor and City Council have dedicated funding to ensure future water availability by expanding the existing Ashland wellfield as well as planning for a second water source.
- A Lower Platte River Drought Contingency Plan is being developed with several regional partners, including the Lincoln Water System, the Nebraska Department of Natural Resources, the Lower Platte South Natural Resource District, the Papio-Missouri River Natural Resource District and the Metropolitan Utilities District. The plan will evaluate potential options to increase streamflows, and it includes development of a streamflow prediction tool.
- The City's watershed management programs have resulted in a high community rating by FEMA, allowing City residents to receive a 25% reduction in flood insurance premiums.
- The City is participating in a study on the Salt Creek Basin to determine future watershed management needs.



One of Lincoln's water reservoirs at 56<sup>th</sup> and Pine Lake Rd.

## Water: Performance Indicators

- Maintain an adequate water supply to meet demand during summer peak months.
- Measure the number of years from the present to when community water demand is expected to exceed water supply. At the beginning of 2017, our indicator was 29 years—about the year 2046.
- Maintain rating that allows for a 25% reduction in flood insurance premiums for property owners in floodplains.
- Meet a community water usage goal of 110 gallons of water per day per person or less.

## Action Strategy: Water #1

Conserve Lincoln's water, and plan for future need.

**What:** The City will continue high-level monitoring, collaboration and planning for the long term resilience of Lincoln's water supply by exploring conservation opportunities and access to additional water sources to meet future need. The City will continue to strive for an annual per capita consumption goal of 110 gallons per day.

**Why:**

- Ensuring the long-term viability of Lincoln's water supply is critical to our future.
- Conservation helps increase available supply and reduces pressure to increase water supply infrastructure.

## Action Strategy: Water #2

Develop a consistent watershed funding source to prevent flooding, and improve the quality of stormwater runoff.

**What:** Consistent funding is needed to protect homes and businesses from flooding, protect water quality and ensure compliance with federal and state water quality standards.

**Why:**

- Protecting homes and businesses from costly and dangerous flooding is essential.
- Inadequate and unpredictable funding threatens the City's ability to adequately prepare for and respond to flood events and comply with federal and state water quality standards.
- Completing key stormwater projects allows for a reduction in flood insurance premiums paid by businesses and homeowners. Past efforts have helped Lincoln residents attain a 25% reduction.



A watershed bio-swale along the Antelope Valley.